

copies of the tablets, cones, &c., which Mr. King has just given us confirm this opinion, and we are brought face to face with a class of tablets to which, hitherto, we have been strangers. And just as the tablets are new to us, so, too, is their shape—for they are round, and resemble large bread-cakes more than anything else—and the eras in which they are dated are new, and the characters in which they are written are more complicated than any which we have hitherto seen. The texts upon them form public accounts and lists of revenue and produce which were drawn up for the public "record office" of the kings of the second dynasty of the city of Ur, about B.C. 2300; the kings most frequently mentioned are Bur-Sin, Ine-Sin and Gamil-Sin. Curiously, however, these tablets are not dated by regnal years, as are thousands and thousands of other documents, but by important events in the past history of the country, such as the capture of an enemy's city, or the invasion of an enemy, or the completion of some great public work, and unfortunately we have, at present, no means of telling *when* these events took place. Among the miscellaneous texts which Mr. King has given us we find a very important inscription in Accadian (No. 96-4-4, 2) containing an invocation to the goddess Nininsina to preserve the lives of Rim-Aku (Arad-Sin) and his father Kudur-Mabug, who flourished, probably before B.C. 2300, about one hundred years before Khammurabi succeeded in consolidating his kingdom in Babylonia. Another remarkable inscription is found on four clay "cones" (No. 96-6-12, 3), whereon we find recorded the name and titles of Mul-babbar, or if we read it as a Semitic name, Amêl-Shamash, a very early *patesi* or viceroy of Babylonia. We believe that this Mul-babbar is here met with for the first time. Still another most valuable text is found on the stone mace-head (No. 96-6-15, 1), where we have recorded a prayer to a god on behalf of one Nin-kagina, the son of Ka-azaggid, and of the viceroy under whom he served; the name of the latter is Nam-maghani, and he ruled over the city of Lagash, or Shurpurla, about B.C. 2500. It is an important fact that the name of Nin-kagina's father is given, and it would seem as if hereditary offices of high rank had already been established at that early period.

Want of space forbids our calling the reader's attention to many other important details in connection with these early texts; but it must be mentioned that their true value arises from the fact that they enable us to fill up part of the gap in our knowledge of the period which lies between the reigns of Khammurabi and Sargon I. of Agade. More than that, when worked out, these tablets will help us to understand the social fabric of the civilisation of the period, and will, no doubt, reveal the conditions of land tenure in Babylonia. It seems as if the land was managed for the kings or viceroys by the priests, and as if much of the administrative work of the country was deputed to them; that kings themselves also held priestly rank is also most probable. But although the forty tablets, &c., here published, yield so many results, it must never be forgotten that our knowledge of this period must be always fragmentary as long as a single tablet remains unpublished. We are very glad to see from the prefatory note to Mr. King's work, that other volumes of a similar character are to be issued

by the Trustees of the British Museum, and we can only hope that the intervals between the appearance of the parts will not be long. They had already laid all cuneiform students under a debt of gratitude for their liberality in the publication of unremunerative books of Assyrian and Babylonian texts, and the present volume will make that debt greater.

In conclusion it may be mentioned that Mr. King's copies have been reproduced by photo-lithography, and that the work is therefore free from misprints which so often puzzle the reader, and lead him, sometimes, astray; the handwriting is clear, and neat, and careful—three qualities which should not be lightly esteemed.

HANDBOOKS OF PHYSIOLOGY.

Kirkes' Handbook of Physiology. By Prof. W. D. Halliburton, F.R.S. Fourteenth edition. Pp. 851. 8vo. (London: John Murray, 1896.)

IT is not very many years ago since "Kirke," as the book before us has been familiarly termed by many generations of students of medicine, had the field all to itself as a physiological handbook. During many years it had no rival; for the "Principles of Physiology" of the late Dr. W. B. Carpenter, although co-existent with it, was far too bulky to be regarded as in any sense a handbook. How different are matters in this respect now! What with Waller, Starling, McKendrick, Stewart, to say nothing of Foster, of Landois and Stirling, and of even bigger books looming in the distance, the student at the present day can take his choice; which he could not do then, for the only book offered to him in the days we are speaking of was the compilation by Dr. Kirkes, which, unlike most text-books, has been destined long to survive its original author. And an excellent compilation it was, founded upon the best work on physiology of its time, and, as some think, of all time, that by Johannes Müller; written, moreover, in a readable manner, so that the attention of the reader was easily maintained, and his interest in the subject never allowed to flag. But, alas! science is progressive, and a book on physiology may be ever so readable to-day but will not be read to-morrow, unless means are taken to bring its material "up to Saturday night." Thereafter comes the inevitable "editing," which may be all well enough so long as the author can himself undertake the repairs of his own fabric, but which is apt to render that fabric a very patchwork quilt of a book when it consists of the paste and scissors work of inserting a paragraph here and deleting a paragraph there, as was to all appearance the manner of preparing a good many of the round dozen of editions which intervened between the original book and the one we are considering.

The result was that the work became full of inconsistencies, amounting in some cases to grave errors; and at a certain period of its career it was so unfavourably regarded by the professors of physiology, that one of the most eminent of these is reported to have addressed his class in the following terms:—"If any gentleman present has purchased a copy of a book called 'Kirkes' Physiology,' I would advise him to take it out with him when he goes for a walk . . . and throw it over the highest

wall he can find." Nevertheless, in spite of this disfavour on the part of the professors, the book held its own in the favour of the student, although whether it did so entirely on its merits, or whether it was assisted by the deeply-rooted conviction which used to be current in the medical schools that "Kirke" was the book that was wanted by the examiners at "the College," is a question which we prefer to leave undecided.

But all this has now been changed. The patching process has been arrested; "Kirke" has been rewritten. And Mr. Murray may be congratulated on the choice he has made of an author—the term "edited" is very justly dropped altogether from the title-page. At the same time we may be permitted to drop a tear of regret that the long and original connection of the editorial staff of "Kirkes' Physiology" with "Bart's" should be ended, and that no one should have been found in that particular school worthy or willing, whichever it may have been, to undertake the task which Prof. Halliburton has now performed. We fancy that the late Dr. Kirkes would be no little taken aback could he behold the transformation which has been effected in his book. The whole arrangement is altered, so far as the physiology proper is concerned; the so-called "animal" functions are now taken first, and the "organic" functions next, while the general phenomena of nutrition are considered last of all. And the book bears the stamp—as is only natural it should do—of being written by one who is himself practically familiar with what he talks about; and this must be always the most important point in a text-book. Not that we would be supposed to undervalue "style," nor have we any particular fault to find with that of this book. But Prof. Halliburton has handicapped himself at the outset by endeavouring to keep up the reputation of "Kirke" for providing all that a student may require in histology and embryology, as well as physiology proper. In this he has, in our opinion, committed an error of judgment, for the chapters upon these subjects occupy a considerable bulk of the volume, which might reasonably have been devoted to considering some of the facts of physiology proper at greater length. The result is that the author has had in many subjects to adopt a style which is too concise to be thoroughly readable; and, indeed, the small amount of space which he has been compelled to devote to some subjects of considerable importance is a decided blemish on the book. Most subjects are quite as fully, and many subjects are much more fully treated of in the "Elements of Physiology" of Dr. Starling than in this one, although Starling's is a very much smaller book; and the difference between the treatment of physiological problems by Waller and our author is not less striking, and is in great measure due, no doubt, to want of the extra space which the omission of histology and embryology would have afforded. Nor has the student any real countervailing benefit, for he will be sure to go for his histology and embryology to books devoted entirely to those subjects, and which give the requisite information more thoroughly and satisfactorily than it can possibly be given in a general treatise of this kind. Although in this respect we think it may with advantage be modified, Prof. Halliburton has, nevertheless, produced an excellent book, and one which will be welcomed by many teachers and students. There

are, however, one or two special points which ought not to pass uncriticised. One of these is the tendency of the author to describe a multiplicity of methods for obtaining particular results, irrespective of the relative value of such methods; and to give a multiplicity of opinions of physiologists on knotty subjects, without always taking a decided line himself. This tendency ought, we think, to be avoided in an elementary text-book, since the result is only to confuse the young student. Another point which we wish to notice is that the author has not, in our opinion, given full credit to other authors from whom he has borrowed either ideas or illustrations. Dr. Halliburton has, it is true, not carried this practice as far as is frequently done, and in most instances gives credit to whom credit is due: it is, indeed, probably by inadvertence that the immediate sources of his information are not everywhere acknowledged. But it is due to every author, and not less to the author of a text-book than to the author of a monograph, that, if his work be in any way appropriated, there should always be the completest acknowledgment of such appropriation. Probably no scientific authors would object to their work being thus utilised, while, on the other hand, most of them might naturally experience annoyance at its utilisation without acknowledgment.

OUR BOOK SHELF.

The Fauna of British India, including Ceylon and Burma. Published under the authority of the Secretary of State for India. Edited by W. T. Blanford. *Moths.* Volume IV. By Sir G. F. Hampson, Bart. Pp. xxviii + 594. 8vo. (London: Taylor and Francis, 1896.)

THE present volume includes the *Pyralide*, and an appendix to the earlier families of moths, thus completing the review of all the Indian moths, except the *Tortrices*, *Tineæ* and *Plume* Moths. The total number of species regarded as valid, exclusive of races or subspecies (many of which latter, it is reasonable to surmise, may hereafter be proved to be specifically distinct from the forms with which they are at present associated), amounts to 5618. The next volume of the "Fauna," it is announced by the editor, will likewise be devoted to insects, and will commence the series of descriptions of Indian Hymenoptera with those of the bees and wasps, by Lieut.-Colonel C. T. Bingham.

We congratulate Sir George Hampson on the completion (so far as the larger moths are concerned) of the important and useful work which he has undertaken. Of the execution of the present volume we need not say much, as we have already expressed our opinion freely, as regards the volumes which have preceded it; and the author's method, and the style of the work have undergone no alteration. We notice no falling off in either respect, nor are we more inclined to approve of such a dogmatic way of stating what cannot at present be more than an hypothesis, as the following:

"From the lower *Pyraustina*, with porrect palpi, and the third joint naked, arose also the other groups of *Pyralide* :

"The *Hydrocampina*, with vein 10 of the fore-wing stalked with 8 and 9 :

"The *Pyralina*, with vein 7 stalked with 8 and 9, and vein 8 of the hind-wing free, giving rise to (*a*), the *Endotrichina*," &c.

We think that cautious evolutionists should simply confine themselves to saying that such and such groups